

WHAT IS CLAIMED IS:

1. A variable-wavelength light source apparatus for generating a measurement optical signal from a measurement light source and outputting the optical signal to an optical device, said variable-wavelength light source apparatus comprising:

a light branching unit for branching the measurement optical signal to a plurality optical signals and outputting the plurality of optical signals to predetermined output terminals;

a light reflection signal output unit for outputting a light reflection signal input from the optical device to a predetermined output terminal;

a first light reception device for receiving branch light output by said light branch unit to convert the branch signal into an electric signal; and

a second light reception device for receiving the light reflection signal output by said light reflection signal output unit to convert the light reflection signal into an electric signal.

2. The variable-wavelength light source apparatus according to claim 1 wherein said light branch unit and said light reflection signal output unit are optical couplers having

a plurality of output terminals; and

said first light reception device, said second light reception device, and the optical device are connected to the plurality of output terminals at the same time.

3. The variable-wavelength light source apparatus according to claim 1 wherein the optical device is one of a measured optical part and a wavelength calibration gas cell connected to a total reflection termination; and

a wavelength of the measurement optical signal output from the measurement light source is calibrated using the wavelength calibration gas cell connected to the total reflection termination.

4. A variable-wavelength light source apparatus comprising:

an light source for emitting a measurement light signal;

an optical coupler having a plurality of input/output terminals;

a first light reception device for receiving a light signal to convert into an electric signal; and

a second light reception device for receiving a light signal to convert into an electric signal,

wherein the optical coupler is input the measurement optical signal, and branches the measurement optical signal

into a first and a second branched optical signals to output the first and second branched optical signals to an optical device and the first light reception device, respectively, and is input a reflection light signal reflected by the optical device to output the reflection light signal to the second light reception device.

5. The variable-wavelength light source apparatus according to claim 4, wherein the plurality of input/output terminals are four input/output terminals.

6. The variable-wavelength light source apparatus according to claim 4, wherein the light source varies a wavelength of the measurement light signal.

7. The variable-wavelength light source apparatus according to claim 4, wherein the first and the second light reception devices and the optical device are connected to the optical coupler at the same time.

8. The variable-wavelength light source apparatus according to claim 4, wherein the optical device is one of a measured optical part and a wavelength calibration gas cell connected to a total reflection termination for calibrating a wavelength of the measurement light signal.

9. The variable-wavelength light source apparatus according to claim 8, wherein the wavelength calibration gas cell is detachably connected to the optical coupler; and

the optical coupler has an absorption wavelength range corresponding to a wavelength of the measurement optical signal.